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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/752,928	01/07/2004	Christopher G. Neiner	MCC 01061 C2US	5794

32233 7590 12/26/2006  
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EXAMINER
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CASTELLANO, STEPHEN J

ART UNIT	PAPER NUMBER
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3781

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	12/26/2006	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/752,928

Applicant(s)

NEINER, CHRISTOPHER G.

Examiner

Stephen J. Castellano

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 October 2006.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☐ Claim(s) 1-7, 10-20 and 27-44 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-7, 10-20 and 27-44 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_.

Claims 8, 9 and 21-26 have been canceled. Claims 1-7, 10-20 and 27-44 are pending.

The amendment filed May 22, 2006 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: The fold in the annular countersink is an isocline fold and has been illustrated (as added to the specification on page 6). Also, that the chuckwall can have a vertical cross-section that can be represented by combining lines, curves, polynomials functions, or trigonometric functions, such as a Fourier series or Taylor series.

Applicant is required to cancel the new matter in the reply to this Office Action.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 29, 31-34, 36-40 and 44 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 29 and 44 states that the annular fold is an isocline fold. Claim 31 states that the second curves comprise a Fourier cosine series. Claim 32 states that the second curves comprise a Fourier sine series. Claim 33 states that the second curves comprise a Fourier series. Claim 34 states that the second curves comprise a Taylor series. Claim 36 states that the function approximating the vertical cross-section of said second member is comprised of a linear

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combination of polynomial functions each having an order greater than or equal to one. None of these limitations were originally supported in the specification. In addition, the limitations of claims 31-34 and 36-40 are not supported in the specification as amended by the substitute specification filed May 22, 2006.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 44 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 44 recites the limitation "said annular fold" in line 1. There is insufficient antecedent basis for this limitation in the claim because the fold had not been previously described as "annular."

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-7, 10-20 and 27-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilkinson et al. (Wilkinson) in view of Brifcani et al. ('634)(Brifcani).

Wilkinson discloses a lid for a can body comprising a center panel, an annular countersink, a chuckwall and a peripheral curl portion. Wilkinson discloses the curl height of less than 0.091 inches in Table I where dimension C. is equal to 0.090 inches. Wilkinson discloses the radius of curvature of the chuckwall of from about 0.4 to about 1.0 inches as shown

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in Fig. 8 and at col. 5, lines 35-38 where the value of  $R_t$  is 0.39 inches which is about 0.4 inches. Generally, the assigned value of from about 0.4 to about 1.0 inches for the chuckwall radius of curvature is not given any criticality within applicant's disclosure. The annular countersink is a reinforcing bead. The chuckwall is non-linear. The diameter of the center panel is less than 80% of the diameter of the peripheral curl portion as evidenced by viewing Fig. 7 and designating that dimension A corresponds to the curl portion diameter and that the center panel diameter is designated by the equation  $B - 4E$  where B represents countersink diameter and E represents countersink radius. A calculation of these diameters using the values for the 206 diameter in Table I provides the following:  $80\% A = 2.091$ .  $B - 4E = 2.030$ . Since the center panel diameter is less than 80% of the curl portion diameter, this limitation is met. It is noted that Fig. 8 represents a curved chuckwall where the chuckwall curves outwardly so that the difference between curl portion diameter and the center panel diameter would be greater.

Wilkinson discloses the invention except for the chuckwall angle of from about 20 to about 80 degrees.

Brifcani teaches a chuckwall angle of 43 degrees. It would have been obvious to modify the chuckwall angle to be 43 degrees has an optimum angle between shallow angles which allow less material to be used and steeper angles which have the advantage of providing a deeper recess with more protection for the center panel portion of the lid and less bending of the lid material in the double seaming operation where the lid is joined to a can body.

In addition, Brifcani teaches the ratio of diameter of the center panel to the diameter of the curl is 80% or less as stated in col. 2, lines 6 and 7 and as shown in Fig. 4 with  $d_5$  representing curl diameter and  $d_1$  representing center panel diameter as calculated with the

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values provided in the table in col. 3. It would have been obvious to modify the curl diameter to center panel diameter ratio to be less than 80% to provide optimum values of strength for stacking while making the can end from less metal to decrease the cost of making the can while maintaining its function and ability to stack.

Re claim 5, the curl portion is the extreme outer portion of the lid located at approximately 20 and 34 and a transitional portion located approximately at 32 extends between the chuckwall and curl portion.

Re claim 6, Brifcani teaches a substantially flat center panel. It would have been obvious to modify the center panel to be flat to provide a section that is not deformed from the flat sheet material the lid is made from eliminating any steps need to deform the center panel with a curved cross section.

Re claim 7, Wilkinson appears to have an arcuate center panel in cross section, the outer peripheral edge is also arcuate.

Re claims 10-16 and 19, the step portion is not shown by Wilkinson. The Official notice taken in the July 20, 2006 Office action has not been challenged in applicant's October 20, 2006 response. Therefore, the previous Official notice will be treated as a prior art admission that step portions are well known in the can lid art, the arcuate shape of such step portions are well known and the dimensions of a radius of curvature for said step portions of about 0.02 to about 0.06 inches are well known. It would have been obvious to provide a step portion to provide separation between the chuckwall and the peripheral curl of the lid.

Re claim 17, the countersink height of from about 0.030 to about 0.115 inches is not shown by Wilkinson. The Official notice taken in the July 20, 2006 Office action has not been

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challenged in the October 20, 2006 response. Therefore, the previous Official notice is being treated as a prior art admission that these countersink dimensions are well known. It would have been obvious to increase the countersink depth to provide greater reinforcement of the can lid and to allow greater flexibility for the chuckwall.

Re claims 29 and 44, the annular fold of the countersink is an isocline fold insofar as claimed and illustrated by applicant since an isocline fold would have strata or layers of the same dip and applicant's isocline fold fails to have layers.

Re claims 30-40, the vertical cross-section of Wilkerson forms a first curve that is comprised of second curves, the second curves and first curve may all have the same radius. The second curves comprise curved lines. As stated in the specification as amended May 22, 2006 on page 7, it is known that the chuckwall vertical cross-section can be represented by combining lines, curves, polynomials functions, trigonometric functions, Fourier series or Taylor series. Therefore, it would have been obvious to modify the curve of Wilkerson's chuckwall to be represented by combining lines, curves, polynomials functions, trigonometric functions, Fourier series or Taylor series.

Re claims 41-44, claim 41 differs from claim 1 only in that the "reinforcing bead" is referred to as a "fold." Claim 41 seems to have a broader scope since a bead is formed from a series of folds wherein the claimed "fold" of claim 41 is a singular fold not required to form a bead. The fold extends radially outward insofar as the fold has a width that extends radially outward much like the width of the reinforcing bead.

Applicant's arguments filed May 22, 2006 have been fully considered but they are not persuasive.

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Regarding the issue of new matter, applicant has not been persuasive in stating that a isocline fold has been shown as originally filed in the drawings. The isocline fold which applicant refers in the top figure of the illustration of folds on page 9 of the amendment filed October 20, 2006 is an upwardly protruding bead rather than a downwardly indented bead, this isocline fold is shown as having multiple layers rather than the singular layer of the present invention. For these reasons, the "isocline" fold language is deemed new matter.

Re the new matter pertaining to Taylor series and polynomials, combining trigonometric functions, combining lines and combining curves and functions, applicant has not been persuasive in proving that the originally submitted figures are directed to a specific limitation of a Taylor series, polynomial, trigonometric function, combining of lines, or combining of curves or functions. The reason for finding these expressions to be new matter is that there was no specific reference to any one of these specific limitations. That a given line could be represented by one of these specifically defined limitations is not disputed and doesn't persuade someone to believe that applicant had one or more specific limitations in his possession at the time of filing the invention. The fact that applicant sets forth that there are a number of specific limitations that are represented by Fig. 1 and 2 works against applicant and shows that the original disclosure and Fig. 1 and 2 represented nothing more than a line with no particular specific limitation. The line could be represented by something other than a Taylor series, polynomial, trigonometric function, combining of lines, or combining of curves or functions. For these reasons, the specific limitations are deemed to represent new matter.

Re the 103 rejection, applicant's remarks are not well understood. Page 15, last sentence of applicant's October 20, 2006 response states that Wilkinson doesn't disclose a nonlinear




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chuckwall. The third full paragraph on page 16 of applicant's October 20, 2006 seems to directly contradict this and concede that the countersink wall is nonlinear in Fig. 8 of Wilkinson. Applicant makes reference to a claimed multipart outer wall (see page 16, line 1 of the October 20, 2006 response). It is believed that applicant is referring to an outer wall having a chuck wall and a peripheral curl as claimed in claims 1 and 41. Wilkinson and Brifcani both disclose chuck walls and peripheral curls. Applicant refers to Wilkinson's chuckwall as "one-part" (see page 16, first sentence of paragraph 3 of the October 20, 2006 response). Applicant's claims do not detail a multiple part chuckwall.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen J. Castellano whose telephone number is 571-272-4535. The examiner can normally be reached on M-Th 6:30-5.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Stephen J. Castellano  
Primary Examiner  
Art Unit 3727

sjc